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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,316	02/14/2002	Charles B. Greenberg	1240D2	1107

7590 08/22/2002

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EXAMINER

VINCENT, SEAN E

ART UNIT	PAPER NUMBER
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1731

5

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/075,316

Applicant(s)

GREENBERG ET AL.

Examiner

Sean E Vincent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 41-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed June 28, 2002 has been considered for the most part. References crossed out are either duplicates or part of a patent family in which another patent was available. Note the included PTO-892.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 41-45, 63, 64 and 76 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 41 recites the limitation "the glass float ribbon" in line 4. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 63 is indefinite because line 4 states "silicone oxide". As understood from reading the specification, the correct compound would be "silicon oxide" and "silicone" is most likely a typographical error.
6. Claims 64 and 76 use the greek letter delta instead of the symbol for angstroms.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

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Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 41-77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 8-27 of U.S. Patent No. 6,027,766. Although the conflicting claims are not identical, they are not patentably distinct from each other because thickness and operating temperatures were merely optimized. Further, the patented claim 3 anticipates the anatase crystal phase along with several other crystal phases.

9. Claims 41-44, 46-50, 52-60, 64, 66, 67, 76 and 77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3-6 of U.S. Patent No. 6,413,581. Although the conflicting claims are not identical, they are not patentably distinct from each other because thickness and operating temperatures were merely optimized.

#### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
12. Claims 41-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leclercq et al (US 4123244) in view of Paz et al (WO 97/07069 or PCT 97/07069 on the PTO-1449).
13. Leclercq et al teaches CVD methods for making tin and titanium crystalline layers on float glass ribbons during or before annealing in the "annealing gallery" adjacent to the float tank. (see col. 3, lines 5-24; col. 4, lines 3-18; col. 5, lines 4-10; Figure 3; Example 3 and Example 4, especially col.8, lines 59-66). Leclercq et al does not teach all of applicant's claimed float glass forming and post-processing steps. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to expect to perform batch melting, pulling, cutting, etc. steps in the float glass manufacturing process of Leclercq et al because float glass manufacturing is very well known in the glass making arts and the additional steps are anticipated in float glass manufacturing.
14. Leclercq et al does not teach that the crystalline tin and titanium layers are photocatalytic-activatable self-cleaning coatings. Paz et al taught that crystalline tin or titanium, preferably anatase, would impart photocatalytically-activatable self-cleaning properties to glass sheets (see page 3, lines 17-28; page 6, line 24 to page 10, line 2; page 12, lines 17-30). It would have been

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obvious to a person of ordinary skill in the art at the time the invention was made to expect the layers formed by the CVD process of Leclercq et al to have these self-cleaning properties because Paz et al showed that it was well known to produce such CVD coatings for that very purpose.

15. Leclercq et al does not teach sodium ion barrier layers. Paz et al taught the formation of various sodium ion barrier layers underneath the self-cleaning layer. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a barrier layer under the self-cleaning layer because Paz et al taught that the self-cleaning properties of the self-cleaning coatings would be improved and preserved by such a barrier layer.

16. Leclercq et al and Paz et al do not teach the precise self-cleaning activity or testing methods for determining such activity as claimed by applicant. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to determine such activity because the specific process conditions recited are not critical but are merely optimal for the particular material being treated and they would be within the skill of the art to determine, *In re Aller et al.*, 105 U.S.P.Q. 233, 42 C.C.P.A. 824. It is the position of the Examiner that it would not require undue experimentation by a person of ordinary skill in the art at the time the invention was made to find these conditions beneficial.

17. Leclercq et al and Paz et al do not teach all of the thickness and temperature specifications claimed by applicant. It would have been obvious to a person skilled in the art at the time the invention was made to use the claimed conditions because the specific process conditions recited are not critical but are merely optimal for the particular material being treated and they would be within the skill of the art to determine, *In re Aller et al.*, 105 U.S.P.Q. 233, 42

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C.C.P.A. 824. It is the position of the Examiner that it would not require undue experimentation by a person of ordinary skill in the art at the time the invention was made to find these conditions beneficial.

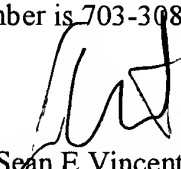
*Conclusion*

18. The prior art made of record and not relied upon is cited to further show the state of the art.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E Vincent whose telephone number is 703-305-3607. The examiner can normally be reached on M - F (8:30 - 6:00) Second Monday Off.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

21. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



Sean E Vincent  
Primary Examiner  
Art Unit 1731

S Vincent  
August 21, 2002